CLAIMS

1. A core barrel for retrieving soil samples, said core barrel comprising two halves, said halves configured to be joined substantially along a plane to form a cylinder having a through bore defining an inner and outer diameter, each of said halves including a pair of longitudinally extending edges, and said halves including a locking configuration to prevent lateral movement of said halves relative to one another with respect to an axis of the core barrel and to also preclude movement of said halves relative to one another in a direction perpendicular to the plane.

2. The core barrel as set forth in claim 1, wherein said locking configuration includes locking tongues extending along at least a portion of the length of each edge along the inner diameter on one half.

3. The core barrel as set forth in claim 2, wherein said tongues on said one half mate with respective notches extending along at least a portion of the length of each edge of said other half.

4. The core barrel as set forth in claim 1, further including intermittent locking tabs to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

5. The core barrel as set forth in claim 4, including locking tongues extending along the length of each edge along the inner diameter on one half that mate with respective notches extending along the length of each edge of said other half and wherein said intermittent locking tabs extend from said tongues and said notches.

6. The core barrel as set forth in claim 5, wherein said intermittent locking tabs include lips extending from said tongues and said notches of said respective halves.

7. The core barrel as set forth in claim 6, wherein said lips extend in a direction substantially parallel to said joining plane.

8. The core barrel as set forth in claim 7, wherein said lips on said one half extend outwardly from said locking tongues away from the axis of said core barrel.

9. The core barrel as set forth in claim 8, wherein said lips on said other half extend inwardly from said notches toward the axis of said core barrel.

10. The core barrel as set forth in claim 3, further including full length locking tabs extending from said tongues and said grooves of said respective halves to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

11. A soil sampling system comprising a drill rod, a core barrel for receiving a soil sample, an adapter coupling for coupling said core barrel to said drill rod, and a drive shoe attached to an end of said core barrel for penetrating the ground, said core barrel including two halves, said halves configured to be joined substantially along a plane to form a cylinder having a through bore defining an inner and outer diameter, each of said halves including a pair of longitudinally extending edges, and said halves including a locking configuration to prevent lateral movement of said halves relative to one another with respect to an axis of the core barrel and to also preclude movement of said halves relative to one another in a direction perpendicular to the plane.

12. The sampling system as set forth in claim 11, wherein said locking configuration includes locking tongues extending along at least a portion of the length of each edge along the inner diameter on one half.

13. The sampling system as set forth in claim 12, wherein said tongues on said one half mate with respective notches extending along at least a portion of the length of each edge of said other half.

14. The sampling system as set forth in claim 13, further including intermittent locking tabs to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

15. The sampling system as set forth in claim 14, wherein said intermittent locking tabs extend from said tongues and said notches of said respective halves.

16. The sampling system as set forth in claim 15, wherein said intermittent locking tabs include lips extending from said tongues and said notches of said respective halves.

17. The sampling system as set forth in claim 16, wherein said lips extend in a direction substantially parallel to said joining plane.

18. The sampling system as set forth in claim 17, wherein said lips on said one half extend outwardly from said locking tongues away from the axis of said core barrel.

19. The sampling system as set forth in claim 18, wherein said lips on said other half extend inwardly from said notches toward the axis of said core barrel.

20. The sampling system as set forth in claim 13, further including full length locking tabs extending from said tongues and said grooves of said respective halves to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

21. A core barrel for retrieving soil samples, said core barrel comprising two halves, said halves configured to be joined substantially along a plane to form a cylinder having a through bore defining an inner and outer diameter, each of said halves including a pair of longitudinally extending edges, and said halves including locking means for locking said halves together to prevent lateral movement of said halves relative to one another with respect to an axis of the core barrel and to also preclude movement of said halves relative to one another in a direction perpendicular to the plane.

22. The core barrel as set forth in claim 21, wherein said locking means includes locking tongues extending along at least a portion of the length of each edge along the inner diameter on one half.

23. The core barrel as set forth in claim 22, wherein said tongues on said one half mate with respective notches extending along at least a portion of the length of each edge of said other half.

24. The core barrel as set forth in claim 23, further including intermittent locking tabs to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

25. The core barrel as set forth in claim 24, wherein said intermittent locking tabs extend from said tongues and said notches of said respective halves.

26. The core barrel as set forth in claim 25, wherein said intermittent locking tabs include lips extending from said tongues and said notches of said respective halves.

27. The core barrel as set forth in claim 26, wherein said lips extend in a direction substantially parallel to said joining plane.

28. The core barrel as set forth in claim 27, wherein said lips on said one half extend outwardly from said locking tongues away from the axis of said core barrel.

29. The core barrel as set forth in claim 28, wherein said lips on said other half extend inwardly from said notches toward the axis of said core barrel.

30. The core barrel as set forth in claim 23, further including full length locking tabs extending from said tongues and said grooves of said respective halves to preclude movement of said halves relative to one another in the direction perpendicular to the joining plane.

31. A core barrel for retrieving soil samples, said core barrel comprising two halves, said halves configured to be joined substantially along a plane to form a cylinder having a through bore defining an inner and outer diameter, each of said halves including a pair of longitudinally extending edges, and said halves including a locking configuration to preclude movement of said halves to relative to one another in a direction perpendicular to the plane, said locking configuration being engaged by matching respective edges of

said halves to one another to form said cylinder while said halves are offset from one another along an axis of said core barrel and then sliding at least one of said halves relative to the other so that said halves are substantially even along the axis of said core barrel.

32. The core barrel as set forth in claim 31, wherein said locking configuration also prevents lateral movement of said halves relative to one another with respect to the axis of said core barrel.